

Common Name: Atlantic halibut

Scientific Name: *Hippoglossus hippoglossus*

Area of Concern: Distributed from Labrador to southern New England in the northwest Atlantic.

Year First Listed as a “Species of Concern”: 2004



Species Description:

Life history: Long lived species, slow to mature. Average age at maturity is believed to be about 10 years (Collette and MacPhee 2002). Large halibut are prolific producing up to 7 million eggs in a single season (Haug and Gulliksen 1988). Females are batch spawners, producing several batches of eggs each year. Spawning varies depending on location and can last from late winter in Canadian waters through September for fish from Georges Bank to the Grand Banks (Collette and MacPhee 2002).

Fish up to 30 cm in length feed almost exclusively on invertebrates, fish 30-80 cm in length feed on both invertebrates and fish, and those greater than 80 cm feed almost exclusively on fish (Kohler 1967).

This is one of the largest fish found in the Gulf of Maine surpassed only by swordfish, tuna, and some larger sharks (Collette and MacPhee 2002). The largest halibut recorded was taken approximately 83 km off Cape Ann and weighed 280 kg eviscerated (Collette and MacPhee 2002). According to Collette and MacPhee (2002), these large fish are rare, and full grown females average 45.5 to 68 kg while males tend to be smaller.

Habitat: Marine, coastal to upper slope, boreal, demersal.

Rationale for “Species of Concern” Listing:

Demographic and Diversity Concerns:

Very large, low to very low productivity (k, T_{max}) (Beverton and Holt 1959, Pauly 1978b; Haug 1990), heavily overfished.

Identified as Threatened by AFS.

NEFSC spring and autumn survey data show that biomass within the Gulf of Maine and Georges Bank remains very low. Indices have fluctuated considerably since the 1960s, and overall have declined. There is high inter-annual variability since few halibut are caught during these surveys; in some years no halibut are caught (NEFSC 2002). It is not known if abundance trends in the Gulf of Maine and Georges Bank have been influenced by changes in seasonal distribution and availability of Atlantic halibut (NEFSC 2002). During both spring and autumn surveys, mean number per tow has been higher than mean weight per tow, which indicates a decrease in the size of halibut (NEFSC 1999). Almost all halibut caught in NEFSC surveys from 1988-1998 were juveniles. NEFSC (2002) states that swept-area biomass indices in spring 2000 and autumn 1999 were both less than 100 mt.

Factors for Decline:

Heavily overfished in the 19th century with no recovery (Bigelow and Schroeder 1953, Brodziak 2000). No estimates of fishery mortality, however exploitation rate indices suggest that exploitation rates have probably been stable since the 1970s, and may have declined during the 1990s (Brodziak 2000). Thus, the stock remains depleted and exploitation rates do not appear to have increased since the 1970s (Brodziak 2000).

The 2001 “Status of Fisheries of the United States” reports that the U.S. population is currently in an overfished condition (NEFSC 2001). Atlantic halibut was added to the Northeast Multispecies FMP in October 1999 (64 FR 55821).

Recommended overfishing definition reference points for halibut are as follows: $B_{MSY} = 5,400$ mt and $F_{MSY} = 0.06$ per year with a long term potential yield of 300 mt per year. The biomass threshold is set at $\frac{1}{2}$ of B_{MSY} , so that $B_{THRESHOLD} = 2700$ mt.

Currently managed under the Northeast Multispecies Fishery Management Plan. Maximum rebuilding time for this stock is undefined. No directed fishing mortality is permitted ($F = 0$) until the stock is rebuilt (provisional control law). Amendment 9 to the Multispecies FMP implemented a 1 fish halibut possession limit with a minimum size of 36 inches in 1999. A total prohibition was rejected by the Council because it was believed that such a measure would not provide any substantive conservation benefits, since mortality would still occur due to incidental catch (64 FR 55821).

Status Reviews/Research Completed or Underway:

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact Ms. Marta Nammack, NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, x180, Marta.Nammack@noaa.gov; or Kimberly Damon-Randall, NMFS, Northeast Region, One Blackburn Drive, Gloucester, MA 01930-2295, (978) 281-9328, x6535, Kimberly.Damon-Randall@noaa.gov.

References:

Brodziak, J. 2002. *In* Assessment of 20 Northeast Groundfish Stocks through 2001 - Atlantic halibut. A report of the Groundfish Assessment Review Committee. NEFSC. Woods Hole, MA. pp. 206-214.

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